

(ALL BATCHES)  
**DATE: 25.07.2018**                      **MAXIMUM MARKS: 100**                      **TIMING: 3¼Hours**

**PAPER 2 : COSTING**

**Answer to questions are to be given only in English except in the case of candidates who have opted for Hindi Medium. If a candidate who has not opted for Hindi Medium. His/her answer in Hindi will not be valued.**

**Question No. 1 is compulsory.**

**Candidates are also required to answer any Four questions from the remaining Five Questions.**

**In case, any candidate answers extra question(s)/sub-question(s) over and above the required number, then only the requisite number of questions first answered in the answer book shall be valued and subsequent extra question(s) answered shall be ignored.**

**Wherever necessary, suitable assumptions may be made and disclosed by way of note.**

**Question 1:**

- (a) The following are the details in respect of Process A and Process B of a processing factory:

	Process A (Rs.)	Process B (Rs.)
Materials	40,000	--
Labour	40,000	56,000
Overheads	16,000	40,000

The output of Process A is transferred to Process B at a price calculated to give a profit of 20% on the transfer price and the output of Process B is charged to finished stock at a profit of 25% on the transfer price. The finished stock department realized Rs. 4,00,000 for the finished goods received from Process B.

PREPARE process accounts and CALCULATE total profit, assuming that there was no opening or closing work-in-progress. **(5 Marks)**

- (b) Two workers 'A' and 'B' produce the same product using the same material. Their normal wage rate is also the same. 'A' is paid bonus according to Rowan scheme while 'B' is paid bonus according to Halsey scheme. The time allowed to make the product is 120 hours. 'A' takes 90 hours while 'B' takes 100 hours to complete the product. The factory overhead rate is Rs. 50 per hour actually worked. The factory cost of product manufactured by 'A' is Rs. 80,200 and for product manufactured by 'B' is Rs. 79,400.

Required:

- (i) COMPUTE the normal rate of wages.
- (ii) CALCULATE the material cost.
- (iii) PREPARE a statement comparing the factory cost of the product as made by two workers.

**(5 Marks)**

- (c) Bank of Surat operated for years under the assumption that profitability can be increased by increasing Rupee volume. But that has not been the case. Cost analysis has revealed the following:

Activity	Activity Cost (Rs.)	Activity Driver	Activity Capacity
Providing ATM Service	1,00,000	No. of Transactions	2,00,000
Computer Processing	10,00,000	No. of Transactions	25,00,000

Issuing Statements	8,00,000	No. of Statements	5,00,000
Customer Inquiries	3,60,000	Telephone Minutes	6,00,000

The following annual information on three products was also made available:

Activity Driver	Checking Accounts	Personal Loans	Gold Visa
Units of Product	30,000	5,000	10,000
ATM Transactions	1,80,000	0	20,000
Computer Transactions	20,00,000	2,00,000	3,00,000
Number of Statements	3,00,000	50,000	1,50,000
Telephone Minutes	3,50,000	90,000	1,60,000

Required

(i) CALCULATE rates for each activity.

(ii) Using the rates computed in requirement (i), CALCULATE the cost of each product.

**(5 Marks)**

(d) From the following information, CALCULATE Labour turnover rate and Labour flux rate:

No. of workers as on 01.01.20X8 = 7,600

No. of workers as on 31.12.20X8 = 8,400

During the year, 80 workers left while 320 workers were discharged and 1,200 workers were recruited during the year; of these, 300 workers were recruited because of exits and the rest were recruited in accordance with expansion plans.

**(5 Marks)**

### Question 2:

(a) A Ltd. produces a product 'Exe' using a raw material Dee. To produce one unit of Exe, 2 kg of Dee is required. As per the sales forecast conducted by the company, it will be able to sell 10,000 units of Exe in the coming year. The following is the information regarding the raw material Dee:

(i) The Re-order quantity is 200 kg. less than the Economic Order Quantity (EOQ).

(ii) Maximum consumption per day is 20 kg. more than the average consumption per day.

(iii) There is an opening stock of 1,000 kg.

(iv) Time required to get the raw materials from the suppliers is 4 to 8 days.

(v) The purchase price is Rs.125 per kg.

There is an opening stock of 900 units of the finished product Exe.

The rate of interest charged by bank on Cash Credit facility is 13.76%.

To place an order company has to incur Rs.720 on paper and documentation work.

From the above information, COMPUTE the followings in relation to raw material Dee:

(i) Re-order Quantity

(ii) Maximum Stock level

(iii) Minimum Stock level

(iv) The impact on the profitability of the company by not ordering the EOQ. [Take 364 days for a year]

**(10 Marks)**

(b) SK Ltd. engaged in the manufacture of tyres. Analysis of income statement indicated a profit of Rs.150 lakhs on a sales volume of 50,000 units. The fixed cost is Rs. 850 lakhs which appears to be high. Existing selling price is Rs. 3,400 per unit. The company is considering to revise the profit target to Rs. 350 lakhs. You are required to COMPUTE –

(i) Break-even point at existing levels in units and in rupees.

- (ii) The number of units required to be sold to earn the target profit.  
 (iii) Profit with 15% increase in selling price and drop in sales volume by 10%.  
 (iv) Volume to be achieved to earn target profit at the revised selling price as calculated in (iii) above, if a reduction of 8% in the variable costs and Rs. 85 lakhs in the fixed cost is envisaged. **(10 Marks)**

**Question 3:**

- (a) R Limited is presently operating at 50% capacity and producing 60,000 units. The entire output is sold at a price of Rs. 200 per unit. The cost structure at the 50% level of activity is as under:

	<b>Rs.</b>
Direct Material	75 per unit
Direct Wages	25 per unit
Variable Overheads	25 per unit
Direct Expenses	15 per unit
Factory Expenses (25% fixed)	20 per unit
Selling and Distribution Exp. (80% variable)	10 per unit
Office and Administrative Exp. (100% fixed)	5 per unit

The company anticipates that the variable costs will go up by 10% and fixed costs will go up by 15%.

You are required to PREPARE an Expense budget, on the basis of marginal cost for the company at 50% and 60% level of activity and COMPUTE profits at respective levels.

**(10 Marks)**

- (b) The following information has been provided by a company:

Number of units produced and sold	6,000
Standard labour rate per hour	Rs. 8
Standard hours required for 6,000 units	-
Actual hours required	17094 hours
Labour efficiency	105.3%
Labour rate variance	Rs. 68,376 (A)

You are required to CALCULATE:

- (i) Actual labour rate per hour  
 (ii) Standard hours required for 6,000 units  
 (iii) Labour Efficiency variance  
 (iv) Standard labour cost per unit  
 (v) Actual labour cost per unit.

**(10 Marks)****Question 4:**

- (a) Following information have been extracted from the cost records of XYZ Pvt. Ltd.

<b>Stores:</b>	<b>(Rs.)</b>
Opening balance	1,08,000
Purchases	5,76,000
Transfer from WIP	2,88,000
Issue to WIP	5,76,000
Issue for repairs	72,000
Deficiency found in stock	21,600

<b>Work-in-process:</b>	<b>(Rs.)</b>
Opening balance	2,16,000

Direct wages applied	2,16,000
Overheads charged	8,64,000
Closing balance	1,44,000

<b>Finished Production:</b>	<b>(Rs.)</b>
Entire production is sold at a profit of 15% on cost of WIP	
Wages paid	2,52,000
Overheads incurred	9,00,000

PREPARE Stores Ledger Control Account, Work-in-Process Control Account, Overheads Control Account and Costing Profit and Loss Account. **(10 Marks)**

- (b) SV chemicals Limited processes 9,00,000kgs. of raw material in a month purchased at Rs. 95 per kg in department X. The input output ratio of department X is 100 : 90. Processing of the material results in two joint products being produced 'P<sub>1</sub>' and 'P<sub>2</sub>' in the ratio of 60 : 40. Product 'P<sub>1</sub>' can be sold at split off stage or can be further processed in department Y and sold as a new product 'YP<sub>1</sub>'. The input output ratio of department Y is 100 : 95. Department Y is utilized only for further processing of product 'P<sub>1</sub>' to product 'YP<sub>1</sub>'. Individual departmental expenses are as follows:

	Dept. X (Rs. lakhs)	Dept. Y (Rs. lakhs)
Direct Materials	95.00	14.00
Direct Wages	80.00	27.00
Variable Overheads	100.00	35.00
Fixed Overheads	75.00	52.00
Total	350.00	128.00

Further, selling expenses to be incurred on three products are:

Particulars	Amount (Rs. in lakhs)
Product 'P <sub>1</sub> '	28.38
Product 'P <sub>2</sub> '	25.00
Product 'YP <sub>1</sub> '	19.00

Selling price of the products 'P<sub>1</sub>' and 'P<sub>2</sub>' at split off point is Rs. 110 per kg and Rs. 325 per kg respectively. Selling price of new product 'YP<sub>1</sub>' is Rs. 150 per kg.

You are required to:

- (i) PREPARE a statement showing apportionment of joint costs, in the ratio of value of sales, net of selling expenses.
- (ii) PREPARE a Statement showing profitability at split off point.
- (iii) PREPARE a Statement of profitability of 'YP<sub>1</sub>'.
- (iv) DETERMINE that would you recommend further processing of P<sub>1</sub>? **(10 Marks)**

**Question 5:**

- (a) The standard labour component and the actual labour component engaged in a week for a job are as follows:

	Skilled Workers	Semi-skilled Workers	Un-Skilled workers
Standard number of workers in the gang	32	12	6
Standard wage rate per hour (Rs.)	30	20	10
Actual number of workers employed in the gang during the week	28	18	4
Actual wages rate per hour (Rs.)	34	23	12

During the 40 hours working week the gang produced 1,800 standard labour hours of work. CALCULATE:

- (i) Total labour cost variance;
- (ii) Labour yield variance;
- (iii) Labour mix variance; and
- (iv) Labour wage rate variance.

**(10 Marks)**

- (b) 'RP' Resorts (P) Ltd. offers three types of rooms to its guests, viz deluxe room, super deluxe room and luxury suite. You are required to COMPUTE the tariff to be charged to the customers for different types of rooms on the basis of following information:

Types of Room	Number of Rooms	Occupancy
Deluxe Room	100	90%
Super Deluxe Room	60	75%
Luxury Suite	40	60%

Rent of 'super deluxe' room is to be fixed at 2 times of 'deluxe room' and that of 'luxury suite' is 3 times of 'deluxe room'. Annual expenses are as follows:

Particulars	Amount (Rs. lakhs)
Staff salaries	680.00
Lighting, Heating and Power	300.00
Repairs, Maintenance and Renovation	180.00
Linen	30.00
Laundry charges	24.00
Interior decoration	75.00
Sundries	30.28

An attendant for each room was provided when the room was occupied and he was paid Rs. 500 per day towards wages. Further, depreciation is to be provided on building @ 5% on Rs. 900 lakhs, furniture and fixtures @ 10% on Rs. 90 lakhs and air conditioners @ 10% on Rs. 75 lakhs.

Profit is to be provided @ 25% on total taking and assume 360 days in a year.

**(10 Marks)**

**Question 6:**

- (a) DISCUSS cost classification based on variability. **(5 Marks)**
- (b) EXPLAIN Single and Multiple Overhead Rates. **(5 Marks)**
- (c) DISCUSS the four different methods of costing alongwith their applicability to concerned industry? **(5 Marks)**
- (d) STATE how Economic Batch Quantity is determined? **(5 Marks)**

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